

REMARKS/ARGUMENTS

No claim amendments have been made.

The Examiner has rejected claims 1-33 under 35 U.S.C. 103(a) as being unpatentable over Delphi 4 Unleashed Chapter 3 (referred to as “Polymorphism” by the Examiner) in view of US 20440039745 (referred to as “Evans” by the Examiner). Applicants traverse the rejection of claims 1-33.

Independent claims 1, 11, 21, 31

Independent claims 1, 11, 21, 31 require managing devices by:
receiving a request implemented via at least one device independent class;
traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy database stores a class hierarchy and associations between classes; and
modifying the received request, wherein in the modified request the least one device independent class has been translated to the at least one device specific class.

The Examiner has rejected independent claims 1, 11, 21, 31 under 35 U.S.C. 103(a) as being unpatentable Polymorphism in view of Evans.

Applicants submit that nowhere does the cited Polymorphism (page 4, lines 21-25; page 5, lines 5-9) or the cited Evans (Abstract, paragraphs 8, 11, 175), either alone or in combination, teach or suggest the claims requirements of traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class.

The Examiner has mentioned that page 4, lines 21-23 of the cited Polymorphism discloses the claim requirement of traversing a class hierarchy database to determine at least one device specific class that corresponds to the at least one device independent class. Applicants respectfully submit that the cited Polymorphism discusses how a method on an object can be allowed to act in many different ways. For example, one object , called shape may “morph” from one functionality to another, depending on the context of the call. Polymorphism discusses a series of objects which descend from one base class and respond to the same virtual command to produce different outcomes. However, nowhere does the cited Polymorphism teach or suggest the claim requirements of:

- (i) at least one device independent class
- (ii) at least one device specific class that corresponds to the at least one device independent class.

In the cited *Polymorphism* (Page 3; section entitled “A Simple Example of Polymorphism”), the four objects TRectangle, TEllipse, TCircle and Tsquare objects are each a descendant of a base class called TShape. However, the cited *Polymorphism* does not teach or suggest the claim requirements of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class. The four objects TRectangle, TEllipse, TCircle and Tsquare objects are each a descendant of a base class called TShape and there is no teaching or suggestion in the cited *Polymorphism* of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class.

Should the Examiner continue to maintain the rejection the Examiner is requested to indicate which elements of the cited *Polymorphism* correspond to each of the following:

- (i) at least one device independent class
- (ii) at least one device specific class that corresponds to the at least one device independent class.

Additionally, nowhere is there any teaching or suggestion in the cited *Polymorphism* of traversing a class hierarchy database. While the cited *Polymorphism* may discuss that a method of an object can act in many different ways there is no teaching or suggestion of the claim requirements of traversing a class hierarchy database. Should the Examiner continue to maintain the rejection the Examiner is further requested to indicate where the cited *Polymorphism* teaches or suggests the claim requirement of traversing a class hierarchy database.

In fact the cited *Polymorphism* teaches away from the claim requirements of at least one device independent class and at least one device specific class that corresponds to the at least one device independent class because the cited *Polymorphism* discusses on page 5, lines 11-12: “....you can use an object of a single type yet have it behave in many different ways”. Therefore, the cited *Polymorphism* is related to the usage of an object of a single type in many different ways, whereas the claims require at least one device independent class and at least one device specific class that corresponds to the at least one device independent class, wherein the class hierarchy is traversed to determine the at least one device specific class.

For the above reasons claims 1, 11, 21, 33 are patentable over the cited art.

Dependent claims 2-10, 12-20, 22-30, 32-33

Additionally, claims 2-10, 12-20, 22-30, 32-33 depend directly or indirectly on the pending independent claims 1, 11, 21, 31. Applicants submit that these claims are patentable over the cited art because they depend from claims 1, 11, 21 and 31 which are patentable over the cited art for the reason discussed above, and because the combination of the limitations in the dependent claims and the base and intervening claims from which claims 2-10, 12-20, 22-30, 32-33 depend provide further grounds of distinction over the cited art.

Dependent claims 2, 12, 22, 32

Dependent claims 2, 12, 22, 32 depend on claims 1, 11, 21, 33 respectively and further require:

mapping at least one device independent class attribute to at least one device specific class attribute in the modified request;

mapping at least one device independent property to at least one device specific property in the modified request;

generating a device specific request from the modified request, in response to mapping the at least one device independent class attribute and the at least one device independent property; and

sending the device specific request to a managed device.

The Examiner has mentioned that paragraph 177 of the cited Evans discloses the claim requirements of mapping at least one device independent class attribute to at least one device specific class attribute in the modified request. Applicants submit that paragraph 177 of the cited Evans discusses “a novel mapping of the managed physical and logical objects and their associations”. Nowhere does the cited Evans teach or suggest claim requirement of the mapping of at least one device independent class attribute to at least one device specific class attribute.

The Examiner has also mentioned that paragraph 175 of the cited Evans discloses the claim requirement of mapping at least one device independent property to at least one device specific property in the modified request. Applicants submit that paragraph 175 of the cited Evans discusses a common information model (CIM) in which the schema models “physical and logical entities, as well as associations”, where the associations are “between logical and

physical entities.” Nowhere does the cited Evans teach or suggest the claim requirements of mapping at least one device independent property to at least one device specific property.

For the above reasons claims 2, 12, 22, 32 are patentable over the cited art.

Dependent claims 3, 13, 23

Dependent claims 3, 13, 23 depend on claims 1, 11, 21 respectively and require: further modifying the received request to include at least one association between device specific classes in the class hierarchy.

Paragraph 211 of the cited Evans that has been used in rejecting claims 3, 13, 23 discuss associations that “define a mapping between a logical device and a physical component that implements the device.” However, nowhere does the cited paragraph 211 of the cited Evans teach or suggest modifying the received request to include at least one association between device specific classes in the class hierarchy.

For the above reasons claims 3, 13, 23 are patentable over the cited art.

Dependent claims 4, 14, 24, 33

Dependent claims 4, 14, 24, 33 depend on claims 1, 11, 21, 31 respectively, wherein the received request indicates a source class and a requested class, and further require:

determining a specific association between a first device specific class that corresponds to the source class and a second device specific class that corresponds to the specific class, wherein the specific association corresponds to a managed device.

The claims require that the received request indicate a source class and a requested class and nowhere does the cited Polymorphism or the cited Evans teach or suggest these claim requirements.

The Examiner has mentioned that page 6 of the cited Polymorphism discusses the claim requirement that the received request indicates a source class and a requested class. Applicants respectfully submit that that the cited Polymorphism discusses a series of objects which descend from one base class, but does not teach or suggest the claim requirement of a source class and a requested class. The Examiner mentions a “parent class” and that child requests are “made to functions of the parent class.” Should the Examiner continue to reject the claims, the Examiner is

requested to indicate which element of the cited Polymorphism is the source class and which element is the requested class.

For the above reasons claims 4, 14, 24, 33 are patentable over the cited art.

Dependent claims 5, 15, 25

Claims 5, 15, 25 depend on claims 4, 14, 24 respectively, wherein the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

The cited paragraph 178 of the cited Evans discusses managed devices and entity specific information and associations between logical and physical entities. However nowhere does the cited Evans teach or suggest the claim requirement that the source class represents storage pools and the requested class represents storage volumes corresponding to a storage pool.

For the above reasons claims 5, 15, 25 are patentable over the cited art.

Dependent claims 6, 16, 26

Claims 6, 16, 26 depend on claims 1, 11, 21, wherein the received request indicates a source class and a base association and further requires:

determining a first device specific class from the class hierarchy database, wherein the first device specific class has a specific association with a second device specific class that corresponds to the indicated source class, and wherein the specific association corresponds to the base association.

The cited paragraph 11 of the cited Evans discusses a base index and an association in which a physical entity realizes a logical entity. However, nowhere does the cited Evans teach or suggest the claim requirements of a base association wherein the specific association corresponds to the base association.

For the above reasons claims 6, 16, 26 are patentable over the cited art.

Dependent claims 7, 17, 27

Claims 7, 17, 27 depend on claims 1, 11, 21, wherein the receiving, traversing, and modifying are performed by a proxy, and further require:

generating a device specific request in a device specific language; and

sending the device specific request in the device specific language to a managed device coupled to the proxy.

Nowhere does the cited paragraph 159 of the cited Evans teach or suggest the claim requirement of proxy as required by the claims. Instead, the paragraph 159 of the cited Evans discusses an agent, an NMS, and a management information base.

For the above reasons claims 7, 17, 27 are patentable over the cited art.

Conclusion

For all the above reasons, Applicant submits that the pending claims are patentable over the art of record. Should any additional fees beyond those indicated be required, please charge Deposit Account No. 09-0466.

The attorney of record invites the Examiner to contact him at (310) 557-2292 if the Examiner believes such contact would advance the prosecution of the case.

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